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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/057,423	01/24/2002	Simon Alexander Hanson Rose	AG/3-21900/A/AC 509/DIV 2	1070
324	7590	03/27/2008	EXAMINER	
JoAnn Villamizar Ciba Corporation/Patent Department 540 White Plains Road P.O. Box 2005 Tarrytown, NY 10591			QAZI, SABIHA NAIM	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/057,423

Applicant(s)

ROSE ET AL.

Examiner

Sabiha Qazi

Art Unit

1616

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 7, 8, 10, 11 and 17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 7, 8, 10, 11 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI/08)
- Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Final Office Action

Claims 1, 7-8, 10, 11, and 17 are pending. Amendments are entered. No claim is allowed.

Summary of this Office Action dated January 12, 2008

1. Information Disclosure Statement
2. Copending Applications
3. Specification
4. 35 USC § 112 (1)--Written Description Rejection
5. Double Patenting Rejections
6. 35 USC § 103 Rejections
7. Response to Remarks
8. Conclusion
9. Communication

Name Change

- Applicants acknowledge that inventors are same. A correction of names is requested.
- The Examiner noted a name difference in copending applications.

Applicant's response regarding the name change is incomplete. What is the reason to write the name in different ways? Applicant may select any name so that it will not be confusing for any one who may be looking for a double patenting or for any other issue.

- **Inventors in 10/057423:** Simon Rose and Jayne Turner
- **Inventors in 09/361816:** Simon Alexander Hanson Rose and Jayne Anne Turner

The name of the patent application for 09/361816, see this is HANSON ROSE et al., while the name for 10/057423 is ROSE et al.

35 USC § 112 --- First Paragraph Written Description Rejection

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1, 7-8, 10, 11 and 17 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Presently claimed invention is drawn to:

An aqueous soil treatment composition containing essentially water and, in solution, comprising adding an aqueous soil treatment composition consisting essentially of:

(a) An ionic water-soluble fertilizer in an amount of at least 10 weight percent, and

(b) A water-soluble anionic polymer which has the intrinsic viscosity of from 9-12 dl/g and is formed from water-soluble monomer blend comprising 60-80% anionic monomer and from 40 to 20% nonionic monomer, the composition having a viscosity of not more than 4,000 cps, wherein the aqueous soil treatment composition is suitable for being processed in dosing equipment which is in place for processing solutions of fertilizer alone and the aqueous soil treatment composition stabilizes and fertilizes the soil.

Applicant had no possession of the claimed subject matter at the time the application was filed. The data presented in the specification on pages 10-12 does not describe the invention a claimed. Claim is drawn to (a) an ionic, water-soluble fertilizer in an amount of at least 10 wt.%, and

(b) a water-soluble anionic polymer which has intrinsic viscosity of from 9 to 12 dl/g and is formed from water-soluble monomer blend comprising 60 to 80 wt.% anionic monomer and from 40 to 20 wt.% nonionic monomer, the composition having a viscosity of not more than 4,000 cps, wherein the aqueous soil treatment composition is suitable for being processed in dosing equipment which is in place for processing solutions of fertilizer alone and the aqueous soil treatment composition stabilizes and fertilizes the soil and the polymer (b) is a copolymer of acrylamide with an alkali metal salt of acrylic acid.

Compounds containing intrinsic viscosity of from 9-12 dl/g and is formed from water-soluble monomer blend includes thousands of compounds having different chemical structures, different molecular weight and different chemical properties. Compounds containing intrinsic viscosity of from 9-12 dl/g include large number of compounds having different molecular weight, different structures and different chemical properties. It is impossible to determine the properties, for a wide range of different class of compound. Applicants had no possession of the subject matter as has been claimed.

The written description requirement prevents applications from using the amendment process to update the disclosure in their disclosures (claims or specification) during the pendency before the patent office. Otherwise applicants could add new matter to their disclosures and date them back to their original filing date, thus defeating an accurate accounting of the priority of the invention. See 35 USC 132. The function of description requirement is to ensure that the inventor had possession, as of filing date of the application relied on, the specific subject matter claimed by him.

See *Genetech*, 108 F.3d 1361, 1365 (Fed. Cir. at 1366, 78, 1999).

The test for determining compliance with the written description requirement is whether the disclosure of the application as originally filed reasonably conveys to one skilled in the art that the inventor had the possession at the time of the later claimed subject matter, rather than the presence or absence of literal support in the specification for the claimed language. See *In re Kaslow*, 707 F.2d 1366, 1375 (Fed. Cir. 1983).

In the present case Applicant has no possession of the subject matter at the time the application was filed.

See MPEP 2163.06.

Double Patenting Rejection

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground

provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 7-8, 10, 11 and 17 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-18 of U.S. Patent No. 6,397,519. Although the conflicting claims are not identical, they are not patentably distinct from each other because in present application component (a) is an ionic, water-soluble fertilizer wherein in US ' 519 component is a calcium compound. It is well known that calcium compounds can be used as soil stabilizers, which also show effective water infiltration, see lines 36-46 in column 1. Soluble calcium compounds, which can be used, include calcium chloride, calcium nitrate, a blend of calcium nitrate with ammonium nitrate and chelate forms of calcium. Calcium ammonium nitrate is one of the preferred calcium compounds. See lines 7-12 in column 3. The polymer must be water-soluble and in particular is soluble in an aqueous solution of calcium compound having the same concentration of calcium compound as the final aqueous composition which is desired to be produced. Generally the polymer is substantially linear and is not cross-linked.

The polymer preferably has intrinsic viscosity (IV) of from 8 to 16 dl/g. In this specification intrinsic viscosity is measured by suspended level viscometer at 20.degree. C. in 1 M sodium chloride buffered to pH 7. That is, it is of sufficiently high molecular weight to give a soil stabilisation effect and is not a low molecular weight material which would act as a dispersant.

Preferably IV is at least 8 dl/g, more preferably at least 9 dl/g. It may be up to for instance 30 dl/g but generally we find that the optimum combination of low viscosity of the composition and soil stabilisation performance is given by polymers having IV not more than about 20 dl/g. Particularly preferred IV ranges are from 8 to 16 dl/g, especially 10 to 14 dl/g.

The polymer is formed from water-soluble monomer or monomer blend, usually watersoluble ethylenically unsaturated monomer. The anionic content, i.e. the proportion of anionic monomer in the monomer blend used to form the polymer, is at not more than 40% by weight, preferably not more than 35 or 30% by weight. Particularly preferred polymers have anionic content in the range 2 to 30% by weight.

The monomer blend used to form the polymer preferably comprises at least 2% by weight anionic monomer. This may be any suitable anionic ethylenically unsaturated monomer. It is generally preferred that the anionic monomer is an ethylenically unsaturated carboxylic monomer, in particular acrylic or methacrylic monomer. Salts of acrylic acid are preferred, for instance ammonium or alkali metal, in particular sodium salts.

The polymer may contain small amounts of cationic monomer, for instance up to 20% by weight or 10% by weight but usually the content of cationic monomer is substantially zero.

Generally the anionic monomer is copolymerised with non-ionic monomer, usually ethylenically unsaturated water-soluble non-ionic monomer such as acrylamide or methacrylamide, preferably acrylamide. The monomer blend used to form the polymer comprises at least 65% by weight non-ionic monomer. Particularly preferred polymers have non-ionic content in the range 98 to 65% by weight. Particularly preferred polymers are copolymers of acrylamide with sodium acrylate.

The calcium compound may be any of those which can be used as **soil stabilizers**. Water insoluble or partially water soluble calcium compounds which can be used as soil stabilizers include calcium sulphates, calcium oxides, calcium carbonates, calcium phosphate and calcium cyanamide. $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$, otherwise known as gypsum, is a calcium sulfate commonly used as a soil stabilizer. CaO in its hydrated form of $\text{Ca}(\text{OH})_2$, otherwise known as lime, is a commonly used soil stabilizer. Water soluble calcium compounds which can be used as soil stabilizers include calcium chloride, calcium nitrate, a blend of calcium nitrate with ammonium nitrate and chelated forms of calcium

The aqueous composition of the invention can be made in any convenient manner. For instance polymer may be added to water followed by calcium compound or the two may be added simultaneously. Alternatively, calcium compound may be added to a preformed solution of polymer. However, generally it is preferred that the polymer is added to a

preformed solution of the calcium compound. In particular it is preferred that the polymer is added in solid form, i.e. powder or bead. It is possible to add it in other forms, such as reverse phase dispersion, but solid is preferred. Essentially any particle size polymer can be used as long as gel blocking during polymer dissolution is avoided.

The prepared composition should have viscosity which renders the composition easy to handle. It should in particular be easy to handle (i.e. **preferably pumpable, pourable or sprayable**) in the equipment which is presently used for addition of soil stabilisers to irrigation water and for application of concentrated soil stabilizer solution alone to soil. Preferably viscosity is below 4,000 cPs, more preferably not more than 3,000 cPs. In particular it is not more than 2,000 and especially not more than 1,000 cPs. Particularly preferably it is not more than 600 cPs. Particularly preferred compositions have final viscosity of from 50 to 500 cPs. The viscosity is measured using a Brookfield LVT viscometer at 12 rpm using spindle 2. The invention also provides a soil treatment process comprising irrigating an area of soil with water to which has been added an aqueous soil treatment composition of the invention. Suitable irrigation processes include drip irrigation, furrow irrigation and spray irrigation. Spray irrigation processes include commonly known processes such as sprinkler irrigation and micro sprinkler irrigation. Sprinkler irrigation includes processes which use overhead, pivot, solid set, hand line and wheel line irrigation systems. Micro sprinkler irrigation includes processes using small individual spray heads placed at the crop site. In particular the composition is suitable for use in processes of spray irrigation where irrigation water is pumped to a spray manifold and sprayed over a very large crop area, for instance at least one hectare (ha), and even

up to 100 ha. Such methods comprise pumping water through feed ducting and a mixing zone to a spray manifold supplying one or more spraying devices by which the water is sprayed onto the crop area to be irrigated, and the aqueous composition of the invention is metered into the water at or before the mixing zone.

The compositions of the invention may also be applied to lawns and soils generally associated with home and amenity gardening, such as flower beds, grass lawns, vegetable patches etc. The compositions are suitable for use in the processes of irrigation which use garden hoses, spray devices, lawn sprinklers, watering cans, drip and trickle systems (which involve applying water on a slow steady basis to the plant's root zones to replace water which is lost by evaporation from the soil and transpiration by the plant) and other apparatus commonly used in this area of gardening.

Ammonium nitrate is a known fertilizer.

It would have been obvious to one skilled in the art to prepare additional beneficial compositions and because the reference teaches the similar composition.

Claim Rejections - 35 USC § 103—1st Rejection

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would

have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 7-8, 10, 11 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over AHLNAS et al¹. See the entire document especially col. 3 lines 1-57; examples and claims.

Applicant claims

An aqueous soil treatment composition consisting essentially of water and, in solution, (a) an ionic, water-soluble fertilizer in an amount of at least 10 wt.%, and (b) a water-soluble anionic polymer which has intrinsic viscosity of from 9 to 12 dl/g and is formed from water-soluble monomer blend comprising 60 to 80 wt.% anionic monomer and from 40 to 20 wt.% nonionic monomer, the composition having a viscosity of not more than 4,000 cps, wherein the aqueous soil treatment composition is suitable for being processed in dosing equipment which is in place for processing solutions of fertilizer alone and the aqueous soil treatment composition stabilizes and fertilizes the soil and the polymer (b) is a copolymer of acrylamide with an alkali metal salt of acrylic acid.

AHLNAS et al teaches a controllably active A controllably active fertilizing preparation in the form of an emulsion-suspension or an emulsion is comprised of: a) 30-90% by weight of mixtures containing plant nutrients, b) 5-50% by weight of water, c) 2-20% by weight of an oleophilic organic substance, d) 1-25% by weight of a surface-active substance, and e) 0.1-10% by weight of an acid or its mixture, salt or anhydride. The acid component improves the extraction of phosphor, which embraces the presently claimed invention.

Instant claims differ from the prior art in having a generic scope.

¹ United States Patent No. 5,482,529. See the entire document.

One skilled in the art would be motivated to prepare the aqueous solution-form fertilizer as has been presently claimed because the prior art teaches the ranges in concentration and the amount of diluted fertilizer needed for soil aggregation. The motivation to dilute the composition is taught by the reference. Even if prior does not teach the same use, the two compositions are considered obvious. It had been held by the courts that even in a case where the reference does not teach the same use of the composition, the **two different intended uses are not distinguishable in terms of the composition**, see *In re Thuau*, 57 USPQ 324; *Ex parte Douros*, 163 USPQ 667; and *In re Craig*, 89 USPQ 393.

In absence of any criticality and/or unexpected results of specific combination or ratio the compositions as claimed is considered obvious over the prior art of record.

Claim Rejections - 35 USC § 103—2nd Rejection

Claims 1, 7-8, 10, 11 and 17 rejected under 35 U.S.C. 103(a) as being unpatentable over MILLER (EP 0586,911) in view of WALLACE et al (US Patent 4,797,145) and HASHIMOTO et al (US Patent 3,798,838).

1. Determining the scope and contents of the prior art.

The reference MILLER, EP '911 teaches a composition for the treatment of soil containing an anionic fertilizer and anionic polymer such as polyacrylamide and 97 to 0 mole percent of different water-soluble monomer or salts thereof. See the entire document especially

lines 36-50 and lines 1-30 on page 3; lines 4-40, page 4; Tables, examples and claims. The composition is added to water prior to irrigating an area of soil. See claims 8 and 10.

WALLACE et al., US'145 teach an aqueous composition comprising a water-soluble polymer and fertilizer salts in examples. Various synthetic polymers and salts thereof are taught in lines 23-61, column 3. The instant claims are drawn to a water-soluble fertilizer, WALLACE teaches calcium chloride. EP reference teaches soil modifiers.

2. Ascertaining the differences between the prior art and the claims at issue.

Instant claims are generically taught by the prior art.

3. Resolving the level of ordinary skill in the pertinent art.

MILER in EP '911 teaches gel composition and instant is aqueous composition. (The viscosity would be the same for anionic polymer taught by EP '911). The reference teaches copolymers of acrylamide and acrylic acid, in ranges from 3 to 100 mole percent of acrylic monomer unit or salts and from 97 to 0 mole percent of other water-soluble monomer or salts. (see lines 38-45 on page 3). Useful polymers taught include **polyacrylamide, copolymers or acrylamide and acrylic acid, polyacrylates.** **Examples 1-4 and 7 contain specific polymers of acrylamide and acrylic acid.**

It is known that a chemical compound and its properties for example viscosity, melting point, density etc. are inseparable to the compound). See *In re Spada*, 15 USPQ (2d) 1655, 1658.

WALLACE teaches various polymers wherein copolymers of acrylic acid and acrylamide are included. Concentration of polymers (lines 50-52, 0.1% by weight, column 4) and calcium chloride (line 61, column 6) are taught. Wallace teaches copolymers of acrylic acid or salts thereof. Wallace also teaches the use of calcium chloride, which is fertilizer, see especially line 61 in col. 6.

HASHIMOTO et al. US Patent 3,798,838) teaches a method of irrigation and fertilization. The reference teaches that **partially hydrolyzed polyacrylamide exhibit a synergistic effect to decrease water permeability of the soils**. Furthermore, the reference teaches that plants grow better in the treated soil and are more efficient in uptake of nutrients from the soil. These discoveries can be use to conserve water and fertilizer and improve the efficiency of agronomy by contacting the soil with a solution having a concentration of from 0.001 to about 1 weight percent of a polyacrylamide having from 5 to about 80 percent of its amide groups hydrolyzed to carboxylic acid groups and from 0.001 to 5 weight percent of a water soluble, plant nutrient salt (fertilizer salts).

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

One having ordinary skilled in the art would be motivated at the time of invention to prepare beneficial composition by combining the teachings of the prior art for the improvement of soil. HASHIMOTO teaches an aqueous composition comprising a water soluble polymer such

as polyacrylamide and nutrient (example 1). It also teaches that 12 to 45 percent of the amide groups are hydrolyzed to water-soluble carboxylate groups (see lines 1-6, col. 3). The amount of polymer in water and the viscosity of 2 to 1,000 cps (see lines 10-16, col. 4) and dissolution of a polymer in water is taught (lines 26-34, col. 4). The polymer of HASHIMOTO solution viscosity inherently possesses the instantly claimed intrinsic viscosity. See *In re Mills*, 477 F2d 649, 176 USPQ 196 (CCPA). (The reference must be considered for all it discloses and must not be limited to its preferred embodiments or working examples).

There has been ample motivation provided by the prior art to prepare the composition as instantly claimed because it would have been obvious to select potential anionic polymers which includes acrylamide polymer and combine with the nutrients to achieve the composition use for the treatment of soil. As taught by EP '911. The ratio and ranges would have been obvious to one skilled in the art because HOSHIMOTO and WELLACE teach the viscosities and ratios.

In absence of any criticality and/or unexpected results instant invention is considered *prima facie* obvious to one skilled in the art.

In the light of the forgoing discussion, the Examiner's ultimate legal conclusion is that the subject matter defined by the instant claims would have been obvious within the meaning of 35 U.S.C. 103(a).

Claim Rejections - 35 USC § 103—4th Rejection

Claims 1, 7-8, 10, 11 and 17 stand rejected under 35 U.S.C. 103(a) as being unpatentable over JP 51-124578. The reference teaches an aqueous solution-form soil conditioning fertilizer comprising an **acrylamide-potassium acrylate copolymer**, which embraces the applicant's claimed invention. The reference teaches that composition imparts to soil excellent water resistant aggregation ability and water permeability as well as water retention property which is useful mainly as a fertilizer having a delayed action with respect to nitrogen and potassium. The reference also teaches that it is preferred to use the copolymer in an amount of about 0.001 to 0.05% by weight, based on the weight of the soil, but if desired, the copolymer may be used in a larger or smaller amount. See the entire document, especially Section 2 of Page 1, all examples, and claims.

Instant claims differ from the prior art in having a limitation of at least 10% of fertilizer.

One skilled in the art would be motivated to prepare the aqueous solution-form fertilizer as has been presently claimed because the prior art teaches the ranges in concentration and the amount of diluted fertilizer needed for soil aggregation. The Applicants' arguments that lowering the viscosity as unexpected results is not persuasive, in view of the teachings of the prior art of record, as one skilled in the art would have been motivated to lower the viscosity, as lower viscosity fluids flow easier.

In absence of any criticality and/or unexpected results of specific combination or ratio the compositions as claimed is considered obvious over the prior art of record. See KSR Supreme Court of United States Decision (Decided April 30, 2007, KSR INTERNATIONAL CO. v. TELEFLEX INC. et al. No. 04-1350) where it states that "However, the issue is not whether a person skilled in the art had the motivation to combine the electronic control with an adjustable

pedal assembly, but whether a person skilled in the art had the motivation to attach the electronic control to the support bracket of pedal assembly”.

Claim Rejections - 35 USC § 103—5th Rejection

3. Claims 1, 7-8, 10, 11 and 17 rejected, under 35 U.S.C. 103 (a) as being unpatentable over HASHIMOTO et al. (US Patent 3,798,838).

4. The reference discloses fertilization and irrigation of soil wherein the soils are contacted with the aqueous solution of a water soluble plant nutrient salt and an effective amount of a partially hydrolyzed polyacrylamide to reduce the permeability of the soil without rendering it impermeable to water flow. The reference teaches that the loss of water-sol. fertilizers from highly-water permeable soils is retarded by treating the soil with 0.05-5.0 vols. per pore vol. of an aqs. soln. of ammonium and nitrate salts of conc. 0.001-5% wt as fertilizer and 0.001-0.3% wt. of **partially hydrolysed polyacrylamide** of mol. wt. 300,000-15,000,000 and with **7-65%** of the amide gps. hydrolysed to carboxy to reduce the water permeability of the soil, without preventing water flow. More economical use of fertilizer is achieved and pollution of lakes and rivers by excess nitrates prevented.

5. The reference further discloses that water-soluble plant nutrients and partially hydrolyzed polyacrylamide exhibit a synergistic effect to decrease the water permeability of the soils. Furthermore it discloses that plants grow better in the treated soil and are more efficient in uptake of nutrients from the soil. It also discloses that “These discoveries can be used to conserve water and fertilizer and improve the efficiency of agronomy by connecting the soil with a solution having a concentration of from 0.001 to about 1 weight percent of a polyacrylamide

having from 5 to about 80 percent of its amide groups hydrolyzed to carboxylic acid groups and from 0.001 to 5 weight percent of a water, plant nutrient salt". See the abstract of the invention. Nutrients are fertilizer salts.

6. HASHIMOTO discloses a water-soluble polymer (polyacrylamide) and a nutrient in example 1. The reference also discloses that 12 to 45 percent of the amide groups are hydrolyzed to water soluble carboxylate groups in lines 1-6, column 3 which is the instant polymer. The amount of a polymer in water and a viscosity of 2 to 1,000 cPs are taught in lines 10-14 in column 4. Dissolution of a polymer in water is taught in lines 26-34, column 4. The viscosity of the polymer of HASHIMOTO such solution inherently possess the instantly recited intrinsic viscosity. A reference must be considered for all that is disclosed and must not be limited to its preferred embodiments or working examples.

Response to Arguments

- Double Patenting rejection on US 6,288,010 is withdrawn because TD has been filed. Arguments were fully considered about DP rejection on US Patent 6397519 but are not found persuasive therefore rejections are maintained. Prior art teaches that aqueous composition may be applied directly to soil as a soil stabilizer composition. However, the composition of the invention is intended particularly as a concentrate for use in irrigation, in which processes it will be **diluted and applied to soil areas**. Thus it may contain any materials known for inclusion in such compositions. It generally does not contain additional materials such as oxidizing agents, reducing agents, soil materials or seed materials. Calcium compounds are not particularly used in the present invention

however, “comprising” on claim allows other components can be added. Even if claims are not the obvious as has been argued the specification does teach the invention which is considered obvious.

- Anticipation Rejection over HASHIMOTO (US 3,798,838) is withdrawn because arguments are found persuasive.
- Claims 1, 7-8, 10, 11, and 17 rejected under 35 USC 103 (a) as being unpatentable over AHLNAS ET al (US 5,482,529).

The Applicants argue that:

1) AHLNAS et al teaches pastes or emulsion-suspensions while the instant invention is in solution, therefore the instant invention is unobvious. The Examiner respectfully disagrees. No criticality was seen.

Also: It has been decided by the courts that *even in a case where the reference does not teach the same use of the composition, the two different intended uses are not distinguishable in terms of the composition*, see *In re Thuau*, 57 USPQ 324; *Ex parte Douros*, 163 USPQ 667; and *In re Craig*, 89 USPQ 393.

2) AHLNAS et al does not mention the viscosity of the anionic polymer, percent anionic monomer making up the final polymer, percent of the nonionic monomer making up the anionic polymer, and the resulting viscosity of the final aqueous soil treatment, therefore the instant invention is unobvious. No criticality and or unexpected result was seen.

Claims 1, 7-8, 10, 11, and 17 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 of US Patent No. 6,394,519 ("US '519"). The Applicants argue that the claims of the instant application are not obvious over US '519 because the claimed ranges are different and are therefore not obvious. The Examiner respectfully disagrees. Even if the ranges are different, Applicants have not shown any unexpected and/or unobvious results. What makes the ranges better and/or unexpected? No criticality was seen.

The Applicants' arguments that lowering the viscosity as unexpected results is not persuasive, as one skilled in the art would have been motivated to lower the viscosity, as lower viscosity fluids flow easier. At the time invention was filed present invention would have been obvious for the reasons cited above. . See KSR Supreme Court of United States Decision (Decided April 30, 2007, KSR INTERNATIONAL CO. v. TELEFLEX INC. et al. No. 04-1350) where it states that "However, the issue is not whether a person skilled in the art had the motivation to combine the electronic control with an adjustable pedal assembly, but whether a person skilled in the art had the motivation to attach the electronic control to the support bracket of pedal assembly".

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sabiha Qazi whose telephone number is (571) 272-0622. The examiner can normally be reached on any business day except Wednesday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Krass Frederick can be reached on (571) 272-0580. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sabiha Qazi/

Primary Examiner, Art Unit 1612